Implicit Attitudes Toward an Authoritarian Regime

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Abstract

Existing research on public opinion under authoritarianism focuses on the deliberative half of cognition. Yet in psychology, implicit attitudes and subconscious associations are often viewed as foundational, the basis for explicit attitudes and behavior. This paper adapts the well-known Implicit Association Test (IAT) to study Egyptian citizens’ attitudes toward President Abdel Fattah El-Sisi. Roughly 58% of respondents hold positive implicit attitudes towards Sisi, which suggests citizens have more positive associations with the dictator than conventionally assumed. The data also allows for an investigation of attitude dissociation, whereby individuals hold distinct implicit and explicit attitudes towards a target object. Government employees and Coptic Christians are more likely to hold positive explicit attitudes towards Sisi but negative or neutral implicit attitudes. Students appear to systematically engage in inverse dissociation—they voice criticism towards Sisi despite holding more positive implicit attitudes. The paper closes with a discussion of the merits of the IAT relative to other measures of regime support.

Public opinion; authoritarian; sensitive questions; Implicit Attitude Test (IAT); preference falsification; attitude dissociation; Egypt

Word count: 8492

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Introduction

It is difficult to reliably assess public opinion in authoritarian systems. While many dictators enjoy high levels of regime support on surveys, citizens living in these systems may be altering their responses out of fear or other social desirability biases (Arnold and Feldman 1981). Huang (2013) states this concern bluntly. “In a country without free speech, asking people to directly evaluate performance of leaders is like asking people to take a single-choice exam.”

In the authoritarian politics field, this phenomenon is known as “preference falsification” (Kuran 1991, 1997). The key idea is that citizens’ “private preferences” towards a regime might be distinct from their “public preferences,” what they choose to actively voice to others. In aggregate, this means it can be difficult to tell how much the population supports the regime, which gives revolutions a surprising “now out of never” quality (Kuran 1991).

Social scientists have developed a number of indirect question techniques to reduce these desirability biases, including list experiments (Corstange 2009; Imai 2011; Blair and Imai 2012), randomized response techniques (Zdep et al. 1979; Gingerich 2010), and endorsement experiments (Bullock, Imai, and Shapiro 2011; Blair et al. 2013). The unifying logic of all three techniques is to obscure the respondent’s truthful answer from the researcher. In list experiments, a respondent rates her agreement with a number of statements and is randomly assigned to a treatment condition that includes a sensitive statement. Randomized response techniques, often employing a simple coin flip, require the respondent to answer truthfully only when one side of the coin is observed. In an endorsement experiment, a respondent is asked to rate her satisfaction with a given policy, and the endorsement of different actors is randomly assigned. Variance in levels of support across different endorsement treatments is taken as evidence of variance in support of the actors themselves, although this is never explicitly asked.

These techniques are promising avenues for public opinion research on authoritarianism (Frye et al. 2017), but we believe existing work misses an opportunity to probe deeper into attitude formation. Psychologists now make a distinction between explicit attitudes, of which a person is consciously aware, and implicit attitudes, which may be subconscious. Neither should be considered more “valid” than the other. As Lane et al. (2007) describe, “The elusive ‘true
attitude’ does not seem to exist... It seems sensible to say that implicit and explicit attitudes are equally authentic possessions of their holders” (p. 83-84). A key difference is that explicit attitudes are consciously endorsed, while implicit attitudes and associations may not be accepted (or even known) by the individual (Gawronski and Bodenhausen 2006).

Effectively all research to date on attitudes under authoritarianism has focused on the explicit half of cognition. Yet in psychology, implicit attitudes are often viewed as foundational, the basis for explicit attitudes and behavior itself. Affective, subconscious responses to stimuli occur well-before more deliberative thinking, and often influence that deliberation and subsequent decision-making (Gawronski and Bodenhausen 2006, 2011). For this reason, we think it valuable to “bring implicit attitudes in” to the study of public opinion under authoritarianism. Building on the rich implicit attitude measurement literature in psychology (Greenwald, McGhee, and Schwartz 1998; Karpinski and Steinman 2006; Lane et al. 2007; Nosek, Greenwald, and Banaji 2007), we develop a Single Category Implicit Association Test (SCIAT) that measures attitudes toward Egyptian President Fattah El-Sisi using variance in reaction time to a categorization task (Karpinski and Steinman 2006). Existing survey evidence suggests Egyptian citizens have high levels of support for Sisi (Masoud 2014a,b; Tadros 2014), but it is unclear whether this support is authentic or a product of falsification.

The SCIAT procedure is well-documented elsewhere,¹ but in short, it involves having respondents sort a series of items into different categories as quickly as possible. For the IAT here, the respondents categorized images easily associated with Sisi together with “good” words, and then repeat the task grouping Sisi with “bad” words. Easier, faster pairings are generally interpreted as more strongly associated than pairings that have slower responses. If a respondent takes longer in the sorting task where “good” and “Sisi” are in the same group, this would be evidence of an implicit negative attitude toward President Abdel Fattah El-Sisi.

This basic protocol was implemented online with a representative sample of 844 Egyptian citizens in October 2016. The survey also included several explicit questions on regime support used in existing research on Egyptian public opinion. Combined, these measures allow us to assess a.) implicit attitudes toward Sisi b.) the relationship between expressed explicit/implicit

¹See the Project Implicit website and Karpinski and Steinman (2006).
attitudes and c.) the nature and determinants of attitude dissociation (Cunningham, Preacher, and Banaji 2001; Greenwald, Nosek, and Banaji 2003; Baron and Banaji 2006; Gawronski and Bodenhausen 2006, 2011).

Our core findings are as follows. First, and to our surprise, it appears that the Egyptian population in general has positive associations with the new dictator. Roughly 58% of respondents hold positive implicit attitudes toward Sisi, which actually ties quite closely to his levels of explicit support on our survey– about 59%. Note that these measures tap into different types of attitudes, so direct comparisons between them are somewhat misguided. IATs should not be used to validate or discredit an explicit question technique, or vice versa.

Second, these point estimates mask interesting variation at the individual level. The correlation between the explicit and implicit measure is positive but relatively weak ($r = 0.17$), which is common for more sensitive topics (Nosek 2005) and suggests widespread “attitude dissociation” (Gawronski and Bodenhausen 2006, 2011). About 20% of respondents appear to be engaging in what we term “classic attitude dissociation,” meaning that they voice positive explicit attitudes towards Sisi but hold negative implicit attitudes. Surprisingly, even more respondents (around 25%) appear to be doing the opposite—expressing negative attitudes towards Sisi, but harboring positive implicit associations. We term this behavior “inverse attitude dissociation” given that it is the opposite of standard expectations for authoritarian systems (Kuran 1991). The remaining respondents hold congruous positive (33%) or negative (22%) attitudes.

Third, certain individual attributes appear to be systematically associated with these different attitudinal patterns. Being a government employee or a Coptic Christian drives positive explicit support for Sisi but not positive implicit attitudes (Jiang and Yang 2016). Both groups have reason to voice support for the regime, even when they may not harbor positive subconscious associations with it. Islamists, who have been disproportionately repressed following the demise of the Muslim Brotherhood and Egypt’s fledging democracy (Stacher 2016), hold more

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2This concept is related to but distinct from preference falsification (Kuran 1991, 1997; Jiang and Yang 2016). Attitude dissociation describes a disconnect between expressed explicit attitudes and implicit attitudes, while preference falsification refers to the disconnect between expressed or “public” explicit attitudes and ones actual or “private” explicit attitudes. See Figure 1 and associated discussion.

3This is consistent with Jiang and Yang (2016)’s study of preference falsification in China, which found large gaps between expressed and actual levels of support for the regime among public sector employees.
negative explicit and implicit attitudes. Liberals—individuals who voice support for secular democracy—display congruent positive explicit and implicit attitudes toward the dictator. Most interestingly, inverse attitude dissociation appears more prevalent in the student population. University students are socialized into democratic norms and tend to voice more critical attitudes on the explicit question. Yet on the IAT, students hold more slightly positive implicit attitudes towards Sisi than other respondents.

The broader purpose of the paper is to demonstrate “proof of concept” for the IAT as an alternative sensitive question technique for measuring regime support. Our findings have face validity for the Egyptian case and reveal deeper political dynamics than traditional measures. The conclusion highlights lessons learned from our own experience using the IAT. Implicit methods carry important limitations—higher upfront financial costs, cognitive difficulty, sampling barriers, and administration time. In some contexts, these costs may be outweighed by the IAT’s principal advantages—simplicity in design and analysis, and the ability to tap into implicit attitudes and attitude dissociation. We close by identifying promising areas of future research on implicit attitudes and authoritarianism.

Attitudes and Measurement Techniques

In their simplest definition, attitudes are an association between a concept and an attribute. Positive attitudes map positive attributes to concepts (“pretty” and “flower”), and negative attitudes the opposite (“ugly” and “bug”). Psychologists differentiate between implicit and explicit attitudes. Implicit attitudes automatic, affective, and may be outside of an individual’s conscious awareness and control (Banaji et al. 2001; Lane et al. 2007). Explicit attitudes are those we deliberately think about and endorse (Gawronski and Bodenhausen 2006).

The standard approach in political science is to ask respondents to self-report their explicit attitudes in a survey or interview, often using quantitative scales. The assumption is that respondents have well-defined attitudes, understand the response options, and are willing and able to map their attitudes to the response options (Albertson 2011). The goal is to capture their “actual” explicit attitudes—their real conscious beliefs about a subject or actor (see top
section of Figure 1 for summary).

One concern is that these “expressed” explicit attitudes—what researchers get in response to a survey question—may substantially diverge from a respondent’s actual explicit attitudes. In authoritarian settings, where fear of political repercussions can lead to self-censorship, this disconnect between expressed or “public” explicit attitudes and actual or “private” explicit attitudes is known as preference falsification (Kuran 1991, 1997; Frye et al. 2017; Jiang and Yang 2016). Newer techniques, like list and endorsement experiments, seek to reduce this divergence by posing questions in a less direct manner, reducing the likelihood of social desirability bias.

The implicit approach aims to remove the attitude measurement from the respondent’s direct control and tap directly into her associations between concepts and attributes. The goal is not to measure “actual explicit attitudes,” but implicit attitudes, which are conceptually distinct (Gawronski and Bodenhausen 2006). The most prominent instruments are the Implicit
Association Test (IAT) and its variants (Karpinski and Steinman 2006), as well as the Go/No-go Association Task (GNAT) (Nosek and Banaji 2001) and Affect Misattribution Procedure (AMP) (Payne et al. 2005). Both the IAT and GNAT rely on the assumption that associations affect the time one takes to complete cognitive tasks, and thus variation in completion time can be used as a proxy for the attitudes themselves. In their original IAT grant proposal in 1994, Banaji and Greenwald describe the logic as follows:

“Two categories of words are assigned to each of two response keys. Subjects are asked to rapidly press the right key whenever the stimulus word is *either* female-associated or pleasant in meaning, and the left key for words either male-associated or unpleasant in meaning. Through the course of a session, blocks of trials with the four combinations of category pairings and key assignments are intermixed... The measure of implicit attitude... is the difference between latency with pleasant/male pairing versus pleasant/female pairing. To the extent that responding is faster with pleasant/female than with pleasant/male pairing, the latency-difference measure indicates greater positivity of the implicit attitude associated with female” (Lane et al. 2007).

Beginning with Greenwald, McGhee, and Schwartz (1998), the IAT procedure has been subjected to numerous validation tests and replication. The measurement has proven to have several desirable properties. First, IAT measures exhibit test-retest reliability—respondents’ attitude scores across multiple IATs prove relatively stable (Lane et al. 2007, p. 71). Second, the measure proves largely immune to respondent self-presentation and manipulation (Banse, Seise, and Zerbes 2001; Egloff and Schmukle 2002). Banse, Seise, and Zerbes (2001) find that when instructed to do so, respondents were able to express positive attitudes toward gay men on a self-report questionnaire but not on a homosexual-heterosexual IAT (Greenwald et al. 2009). Third, IAT measures are associated with behavior in many domains. In their meta-analysis of 122 research reports, Greenwald et al. (2009) find an average correlation coefficient of .27 between behavioral/judgment measures and IATs. The predictive power of implicit measures appears to exceed that of explicit measures in areas subject to social desirability concerns. For
example, more negative implicit attitudes toward African Americans predicted more negative nonverbal interactions with an African American confederate in an experiment (McConnell and Leibold 2001) as well as trustworthiness judgments (Stanley et al. 2011).

A growing body of research in social psychology investigates when and why individuals hold incongruous explicit and implicit attitudes, a phenomenon known as “attitude dissociation” (Cunningham, Preacher, and Banaji 2001, Gawronski and Bodenhausen 2006). Researchers have found evidence of distinct implicit and explicit attitudes within individuals toward a range of targets, including age (Greenwald, Nosek, and Banaji 2003) and race (Baron and Banaji 2006). The degree of dissociation varies by topic. In their investigation of 57 content domains, Hofmann et al. (2005) report an average implicit-explicit correlation of .24; Nosek (2005) finds an average correlation of .36 in a similar meta-analysis. Again, dissociation appears to be driven in part by self-presentation. Implicit and explicit attitudes about socially disadvantaged groups show lower correlations (about .15 to .25), while a study of attitudes toward Bush and Gore revealed a particularly high correlation ($r = .66$) (Greenwald, Nosek, and Sriram 2006; Nosek 2005). This latter finding is consistent with the idea that expressing political preferences in democracies is not particularly sensitive.

Note that attitude dissociation is distinct from the preference falsification described by Kuran (1991, 1997) and others. The latter is an active masking of one’s actual, private attitudes in public expression— a difference between 1 and 2 in Figure 1. Attitude dissociation is a difference between 1 and 3, a disconnect between one’s conscious and expressed attitudes and one’s subconscious associations with a target object. Because implicit attitudes can be more strongly related to behavior on sensitive matters (Greenwald et al. 2009), we believe this concept merits further attention in the study of authoritarian politics. The remainder of the paper shows how the IAT can be used to measure implicit attitudes towards an authoritarian regime, using the case of Egyptian President Abdel Fattah El-Sisi.
Background: The Egyptian Political Context

Egypt provides an interesting setting to explore the determinants of attitudes towards government. The country’s current authoritarian backslide can be traced to the events of the “Arab Spring.” On February 11, 2011, nationwide protests succeeded in forcing the end of Egyptian President Hosni Mubarak’s thirty-year rule. Soon after, the Egyptian Supreme Council of the Armed Forces (SCAF) assumed power. After suspending Egypt’s constitution, the SCAF announced its intent to govern the country through a transition to democracy that would include nationwide elections and the drafting of a new constitution, in that order.

Parliamentary elections were held from November 2011 to January 2012. The Muslim Brotherhood-endorsed list, the Democratic Alliance, won a plurality (47.2%) of seats in the legislature. In presidential elections held in June 2012, Islamists won again. After a close runoff, Mohammed Morsi, a Muslim Brotherhood leader, narrowly edged out Ahmed Shafiq, a former Prime Minister and Commander of the Egyptian Air Force.

Despite several early successes, by November 2012 the Brotherhood’s popularity began to wane. Morsi’s increasingly authoritarian behavior, compounded by the Brotherhood’s paranoia and distrust of the military, crippled state institutions. Nationwide protests held on June 30, 2013, one year after Morsi’s inauguration, called for the President’s resignation. The next day, Minister of Defense Abdel Fattah El-Sisi issued an ultimatum on behalf of the Egyptian Armed Forces calling for a political settlement to the crisis. On July 3, Sisi deposed Morsi in a military coup and called for new elections.

After the coup, the Muslim Brotherhood called for counter-protests and sit-ins throughout the country. One of the largest sit-ins was held in Nasr City, Cairo, at Raba’a Al-Adawiya Mosque. Thousands of mostly Muslim Brotherhood supporters packed into the streets adjacent to the mosque calling for Morsi’s reinstatement. Less than two months after the coup, on August 14th, the military raided the area, killing more than 800 protestors, an event Human Rights Watch described as “one of the world’s largest killings of demonstrators in a single day in recent history” (*Rab’a Killings Likely Crimes against Humanity 2014*).

The event punctuated a new normal in Sisi’s Egypt. Levels of repression in Egypt have
exceeded those seen under Mubarak (Sowers 2015, Stacher 2016). According to some estimates, over 40,000 political dissidents were detained in the first year after the coup, compared to 14,000, at most, before the Revolution (Teti, Matthies-Boon, and Gervasio 2014). The regime has threatened and employed sexual violence against detainees, conducted forced disappearances with impunity, and issued execution orders for thousands of political dissidents affiliated with the Muslim Brotherhood.

Despite the scale of repression, Sisi’s popularity initially soared after the coup (Masoud 2014b; Tadros 2014), driven by a wave of nostalgic nationalism, longstanding support for the military, and popular calls for a return to pre-2011 stability. “Sisi mania” quickly contributed to the rise of a powerful cult of personality: Sisi-themed songs, chocolates, t-shirts, and lingerie poured into the streets of major urban areas (Kingsley and Awad 2013). A face-to-face Gallup poll conducted in October 2014 found that Egyptians’ economic outlook, life evaluations, and confidence in government improved markedly following the coup.

By early 2016, Sisi’s veneer of invincibility began to crack, as several unforced errors embarrassed the regime. In April, the government announced it was planning to transfer sovereign control of two Red Sea islands, Tiran and Sanafir, to Saudi Arabia. In May, security forces stormed the Press Syndicate, prompting even state media to criticize the move and call for the Minister of Interior’s dismissal. A week later, EgyptAir flight 804 from Paris to Cairo disappeared, with sixty-six people on board (this followed the bombing of Metrojet Flight 9268 in October 2015).

Reliable assessments of the current level of popular support for Sisi have been difficult to obtain. Most of what we know about popular support for the regime has come from intermittent survey data and impressionistic journalistic accounts. A series of polls conducted by the Egyptian Center for Public Opinion Research since Sisi’s inauguration have consistently confirmed high levels of popular approval, ranging from 79 to 91%. Others have questioned the endurance of Sisi’s repressive bargain. Amidst a steep economic downturn and a currency crisis, protests have increased substantially (Paul 2016). This mismanagement has forced the regime to neglect the very groups upon which its survival depends: government employees, business elites, Copts, unions, and left- and secular-leaning political activists (Stacher 2016). It is unclear precisely
how citizens from these groups feel about the new regime, and the implicit approach can offer some insights into this question.

Survey Design

The SISI-SCIAT was administered online via Project Implicit’s Online Platform. About 1,000 Egyptian citizens completed the survey in October 2016 after receiving an email solicitation from a local marketing research firm. Within this group, 810 respondents had valid IAT scores. Table A1 in the Supporting Information shows descriptive statistics in the SISI-SCIAT as compared to the Egyptian sample of the 2015 wave of the Arab Barometer project. We see that the SISI-SCIAT sample is more educated, younger, and male— which is typical of this sort of online panel. To improve representativeness, in the analysis we weight the data using entropy balancing, which ensures balance in the first moment between our weighted sample to the Egyptian sample from the Arab Barometer with computer access (Hainmueller 2012). While our non-probability sample is not perfect, it represents an improvement over most IAT procedures, which are administered in computer labs at universities or tend to rely on convenience samples.

The survey includes questions that capture standard demographic variables: age, gender, education level, occupation, household income, and religiosity, among others. It also includes a direct question (direct.sisi) on support for Sisi used in other surveys as well as a list experiment (list.sisi). The full questionnaire and Arabic translation is available in the Supporting Information.

Respondents closed the survey by completing a Single Category Implicit Association Test (SCIAT), using Sisi as the attitude object of interest. Note that the standard IAT procedure has two target attitude objects (white vs. black, old vs. young, Pepsi vs. Coke, etc.) and measures

4The text of the direct support question (direct.sisi) is as follows:

P1. In your opinion, do you approve or not approve the performance of Abdel Fattah El-Sisi as President? (Highly approve; Approve; Disapprove; Highly disapprove; Don’t know; No answer)

The text of the list experiment (list.sisi) is as follows:

P2. Take a look at this list of politicians and tell me for how many you generally support their activities: (Gamal Abdel Nasser; Anwar Sadat; Hosni Mubarak; Abdel Fattah El-Sisi (randomly included for 50% of respondents))
their differential association with a single attribute (Greenwald, McGhee, and Schwartz 1998). The resulting measure places respondents on a bipolar scale—i.e., an implicit bias against black people relative to white people (Nosek, Greenwald, and Banaji 2007). However, many attitude objects do not have natural reference points. In contemporary Egypt, for example, it is unclear precisely who Abdel Fattah El-Sisi’s counterpoint would be. Former President Mohamed Morsi is the most logical choice, but he is currently imprisoned, and it is too sensitive to include his name—or the names of any other opposition figures—on any survey instrument. This issue is not Egypt specific. When assessing implicit attitudes towards authoritarian regimes or other political actors, the standard two category IAT is often infeasible and inappropriate.

The Single Category IAT, developed by Karpinski and Steinman (2006), is a well-established alternative (1500+ citations to date) that measures the strength of associations for a single attitude object.

Table 1 provides an overview of the SCIAT procedure used in this paper. Each individual item presented is considered a single trial. In the first two blocks of trials (one practice with 48 and test of 48), respondents place “good” words and Sisi images in the same group by pressing the “E” key on their keyboards. “Bad” words are sorted into a separate category using the “I” key. In the second set of the trials, “bad” and Sisi images are sorted into the same “I” group, and “good” is sorted by itself using the “E” key. As is standard practice, the order was reversed for half the participants (4b and 5b administered before 2a and 3a) to avoid biases induced by fatigue, learning, and so forth. This order is randomly assigned. Respondents were told to complete each sorting trial as quickly as possible. Respondents that pressed the wrong key (an error response) saw a large red “X” and had to click on the correct answer before proceeding to the next trial.

Figure 2 provides a screenshot of the SISI-SCIAT as it appeared to respondents, and Box 1 illustrates the directions preceding Blocks 2a and 3a. The images of Sisi used are shown at the end of the Questionnaire in the Supporting Information. These images were chosen to be representative of Sisi’s presidential persona. More information on error rates, trial latencies, and completion times is available in Figures A4-A6 in the Supporting Information. These distributions fall in the normal range for IATs.
Table 1: SISI-SCIAT Block Ordering

<table>
<thead>
<tr>
<th>Block</th>
<th>Trials</th>
<th>Function</th>
<th>Left-key response</th>
<th>Right-key response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td>Practice</td>
<td>Good words</td>
<td>Bad words</td>
</tr>
<tr>
<td>2_a</td>
<td>48</td>
<td>Practice</td>
<td>Good words + Sisi images</td>
<td>Bad words</td>
</tr>
<tr>
<td>3_b</td>
<td>48</td>
<td>Test</td>
<td>Good words + Sisi images</td>
<td>Bad words</td>
</tr>
<tr>
<td>4_b</td>
<td>48</td>
<td>Practice</td>
<td>Good words</td>
<td>Bad words + Sisi images</td>
</tr>
<tr>
<td>5_b</td>
<td>48</td>
<td>Test</td>
<td>Good words</td>
<td>Bad words + Sisi images</td>
</tr>
</tbody>
</table>

Note: Blocks with a common subscript experienced as one continuous block. Table amended from Karpinski and Steinman (2006).

Figure 2: SISI-SCIAT Screenshots

The Project Implicit platform records the time (in milliseconds) it takes a respondent to complete each trial, which in aggregate provides a measure of her implicit association between the target object (Sisi) and the different word sets (“good” and “bad”). The primary output is the standardized difference in average reaction times across the two test blocks, also known as the “D-score.” This project will use the SCIAT formula employed by Karpinski and Steinman (2006), adapted from Greenwald, Nosek, and Banaji (2003).

\[
\text{implicit.sisi}_i = \frac{X^B_i - X^G_i}{SD_{X_i}} \quad \text{(D-score)}
\]

Here, the D-score for individual \(i\), \(\text{implicit.sisi}_i\), is calculated by subtracting the mean reaction time for all non-practice trials with the Sisi-Good grouping (Block 3_a) \(X^G_i\) from the mean reaction time for the non-practice trials with the Sisi-Bad grouping (Block 5_b) \(X^B_i\), and dividing...
Box 1: Core SCIAT Procedure

Directions Part I

Next, you will use the “e” and “i” computer keys to categorize items into groups as fast as you can. Below are the three groups and the items that belong to each. Please take a moment and read the exemplars carefully before you begin.

Sorting Task Part I

<table>
<thead>
<tr>
<th>Good</th>
<th>Bad</th>
</tr>
</thead>
<tbody>
<tr>
<td>President Abdel Fattah El-Sisi</td>
<td></td>
</tr>
</tbody>
</table>

Good – beautiful, nice, honest, cheerful, excellent, happy, joyful, pleasurable/enjoyable, smiling, superb, kind/generous

Bad – angry, brutal, destructive, corrupt, dirty, scary, mournful, nasty, terrible, sad, sick

President Abdel Fattah El-Sisi – six images

by the standard deviation for all response times within both blocks $SD_{X_i}$. Following the recommendations of Project Implicit, for each respondent, we eliminate responses less than 400 milliseconds and greater than 10,000 milliseconds. For the analysis, we eliminate respondents who had more than 10% of their trials under 400 milliseconds or had a higher than 30% error rate (likely “clickthrough” respondents). Large D-scores indicate greater positive implicit associations with “Sisi.” For some analyses, we use a binary measure, $\text{implicit.sisi.binary}$, which takes a value of 1 if $\text{implicit.sisi} > 0$, and 0 if $\text{implicit.sisi} \leq 0$.

IAT Results

Figure 3 shows the distribution of the D-score measure, $\text{implicit.sisi}$. Again, positive values indicate that the respondent found it easier to sort positive words with the images of Sisi. The distribution is approximately normal but centered above zero ($\bar{X} = 0.0548$, $SD = 0.293$). About 58% of respondents appear to hold positive implicit attitudes towards Sisi. The point estimate does not change appreciably when when we weight the data to better tie to the Arab Barometer
sample with computer access.

Figure 3: Distribution of D-score

Note: Figure shows the unweighted histogram of implicit.sisi as measured by the SISI-SCIAT survey of Egyptian citizens. Positive values indicate positive implicit attitudes toward President Abdel Fattah El-Sisi. The “strong”, “moderate”, and “weak” cutoffs reflect existing practices in the IAT literature.

Figure 4 shows this point estimate and those generated by the two other measurement strategies included in the survey— the direct question direct.sisi and list experiment list.sisi. The unweighted direct question estimates that the proportion of Sisi supporters in the population is about 52%. Note that this is lower than estimates generated from other surveys, which have put the estimate at about 79%. Some of this difference is probably due to differences in the samples, though it is also possible that Sisi’s support has declined over time. When we use the entropy weighted data, the point estimate increases to about 58%.

The list experiment presents a slightly different picture, but the measures are less precise. The unweighted point estimate is 35%, and the weighted estimate is about 63%. The confidence intervals are quite wide for both. This is in a part a function of the fact that only two thirds of respondents saw the list experiment question, but list experiments in general have larger standard errors due to the difference of means setup (Corstange 2009; Imai 2011; Blair and Imai
Figure 4: Point Estimates

Note: Figure shows different estimates of support of Egyptian President Abdel Fattah El-Sisi as measured by the SISI-SCIAT survey of Egyptian citizens. Both the direct measure and implicit measure are collapsed into binary variables (direct.sisi.bin and implicit.sisi.bin). The figure presents both unweighted estimates and estimates using data weighted to tie to the most recent Egypt Arab Barometer sample with computer access. Error bars represent 95% confidence intervals.

Again, we are hesitant to make too much of these estimate comparisons, as implicit (measured by the IAT) and explicit attitudes (measured by the direct questions) are fundamentally distinct concepts. Overall, we can conclude that with both explicit and implicit measures, the majority of Egyptian citizens in our survey showed positive attitudes towards the dictator.

**Application: Determinants of Attitude Dissociation**

While the SCIAT can provide point estimates of the fraction of respondents with positive implicit attitudes, we believe the more promising area of inquiry is to examine the interplay between explicit and implicit attitudes. Figure 5 compares the implicit.sisi measure against the direct.sisi measure— the latter jittered to better show the distribution of individual data points.
There is a weak positive correlation ($r = 0.17$) between the two variables. Note that this does not mean there is something wrong with the IAT. In psychology, correlations of this magnitude are quite common (Hofmann et al. 2005 Nosek 2005) and are taken as evidence of attitude dissociation—when individuals hold incongruous explicit and implicit attitudes. Dissociation occurs when a person’s more deliberative reasoning overrides her automatic associations with a target object (Gawronski and Bodenhausen 2006, 2011). It makes sense to observe dissociation in the Egyptian case, as the expressive environment is quite repressive, and political loyalties less reified. We will return to this theme shortly.

A full 19% of respondents gave positive explicit ratings of Sisi yet yielded negative D-scores
on the IAT portion of the survey \( (\text{implicit}.\text{sisi} < 0) \). We term this “classic dissociation” because it accords with expectations for political expression under authoritarianism (Kuran 1991, 1997). Even more respondents fall in the opposite category—roughly 25% show “inverse dissociation,” expressing contempt for Sisi in the explicit question \( \text{direct}.\text{sisi} \) but having positive values for \( \text{implicit}.\text{sisi} \).

Figure 6: Determinants of Expressed Explicit and Implicit Attitudes

Note: Figure shows coefficient estimates from regressions of the standardized support measures \( (\text{direct}.\text{sisi}.\text{z} \) and \( \text{implicit}.\text{sisi}.\text{z} \)) for different independent variables of interest, across different covariate sets (bivariate, demographic covariates, demographic and region indicators). All data drawn from the SISI-SCIAT. Data is weighted using entropy balancing to tie demographics to the Egyptian sample (with computer access) from the Arab Barometer. Segments represent 95% confidence intervals.

Rather than postulate hypotheses in advance, we engage in exploratory analysis to identify the determinants of these patterns. Figure 6 probes possible correlates of the explicit and implicit measures, using the core demographic covariates in the dataset. Each estimate and confidence interval shows the substantive results of a different linear model, where the point represents the coefficient estimate of the independent variable of interest. Both dependent variables have been standardized to help with interpretability. The red segments are from

\(^5\)Figure A3 in the Supporting Information presents the equivalent analysis using dichotomized depen-
regressions where the standardized direct question \((direct.sisi.z)\) was the dependent variable, and the blue segments correspond to regressions where the standardized implicit measure was used \((implicit.sisi.z)\). The circles indicate a simple bivariate regression, the triangles represent regressions that incorporated a set of demographic covariates \((female, age, lowed, highinc, work.govemp, work.student, christian, islamist, liberal)\), and the squares are from regressions that include demographic covariates and regional indicators \((region.upper, region.delta, region.alex, region.desert, region.cairo)\).

This exploratory analysis yields some substantive findings of interest. Islamists display congruent, negative attitudes toward Sisi.\(^6\) The estimates suggest that everything else equal, respondents that support the influence of religious figures over the state are less likely to voice support for Sisi on the direct question \((-0.1\) to \(-0.2\) estimates for \(direct.sisi.z\)) and also less likely to have positive values on the IAT portion of the survey \((-0.2\) to \(-0.3\) standard deviations). Soon after the coup, Sisi turned the state’s coercive institutions toward the Muslim Brotherhood and other Islamist groups, and thousands of Islamists have been imprisoned or killed (Cunningham 2014). These repressive experiences produce negative subconscious associations with the regime—fear, worry, distrust, danger, malevolence.

Egypt’s liberals– pro-democracy secularists– have congruent positive implicit and explicit attitudes.\(^7\) These individuals had higher direct assessments of Sisi \((0.2\) to \(0.3\) standard deviations) and higher implicit attitudes \((about\ 0.2\ standard\ deviations)\). Liberals originally backed Sisi’s coup on the grounds that Morsi and the Muslim Brotherhood were undermining democracy. Sisi has overseen the marginalization of Islamist influence, which likely drives liberals’ positive associations and may outweigh their own more limited repressive experiences. These associations may be confirmed with deliberative reasoning that prioritizes secularism and stability over democracy itself (Masoud 2014a; Blaydes 2011). As Cook describes, “In a choice between

\(^{6}\)It is currently too sensitive to directly ask Egyptian citizens about their support for the Muslim Brotherhood, but we can proxy for Islamist tendencies through two questions (see S8 and S9 in questionnaire) that elicit support for religious influence over the state. We labeled probable Islamists any respondents that were Muslim and averaged agreement over S8 and S9. About 154 respondents fit this description.

\(^{7}\)We labeled “Liberals” any respondents that averaged agreement over S5 and S7 and disagreement over S8 and S9, a combination of pro-democracy and secularist attitudes.
the authoritarianism of the regime and the Muslim Brotherhood, the liberals will choose the army” (Fisher 2013).

Government officials seem prone to engage in classic dissociation. Respondents that work for the government are more likely to express explicit support (0.4 to 0.8 standard deviations) but less likely to hold positive implicit attitudes (-0.1 to -0.5 estimates for $\text{implicit.sisi.z}$). Under Sisi, officials have experienced a series of disappointments and a degree of marginalization in the system itself. Many state employees welcomed the military's return to power, but Sisi has since rolled back bonuses and slowed wage increases. In 2016, Sisi’s administration passed its signature Civil Service Law, which is aimed at introducing performance reviews and reducing the size of the bloated bureaucracy. This set of negative experiences likely drives down implicit attitudes, but government employees in Egypt may feel compelled to voice support for the regime nonetheless, as they do in other authoritarian systems (Jiang and Yang 2016; Rosenfeld 2015). The economic well-being of state employees is directly tied to the regime itself, and their professional survival is incumbent on state continuity and Sisi’s success.

There was not a group in the sample that seemed particularly prone to inverse attitude dissociation. Compared to other respondents, students are less likely on average to voice support on the direct question, but slightly more likely to hold positive implicit associations with Sisi. These effect sizes are not as strong as the other relationships in the data and are not robust across all the covariate sets, so readers should take this finding with some caution.

The analysis above is meant to display the importance of considering implicit attitudes when assessing public opinion under authoritarianism. Direct questions alone would have yielded the conclusion that Egypt’s Christians, or government employees, are wholly satisfied with Sisi’s rule, and the student population completely disenchanted. The implicit measure suggests these groups are cognitively conflicted, which may have implications for their behavior in times of political crises.
Conclusion

This paper presents findings from a Single Category Implicit Association Test (SCIAT) that measures implicit attitudes toward an authoritarian regime, the Egyptian government headed by President Abdel Fattah El-Sisi. Substantively, the core finding is that the majority of respondents (about 58%) hold positive implicit attitudes toward Sisi. There also appears to be a high level of attitude dissociation, with Christians and government employees voicing support while holding neutral/negative implicit associations. Islamists hold congruent negative implicit and explicit attitudes, and liberals have congruent positive attitudes.

This paper is hardly the first in political science to employ implicit measurement techniques. Existing research explores the explanatory power of implicit attitudes across a range of behavioral domains in democratic contexts (Gawronski, Galdi, and Arcuri 2015). These studies have demonstrated that implicit attitudes towards parties and candidates can be used to prospectively predict political judgments and voter behavior (Friese, Bluemke, and Wänke 2007; Friese et al. 2012; Ksiazkiewicz, Vitriol, and Farhart 2017; Roccato and Zogmaister 2010; Ryan 2017). Implicit attitudes appear particularly helpful in understanding the behavior of independent, undecided, and apathetic voters (Arcuri et al. 2008; Ryan 2017; Theodoridis 2017).

To our knowledge, this paper is the first to utilize the IAT to assess attitudes in the authoritarian context. The study of attitudes in these contexts has traditionally been the purview of direct questions or sensitive question techniques (list, endorsement, and randomized response). Our hope is that this study establishes “proof of concept” for the IAT in this setting and inspires other researchers to explore implicit methods and attitude formation.

To that end, we close with a discussion of our sense of the comparative advantages and disadvantages of the IAT in this context. Its principal disadvantages as we see them are as follows. First, as critics of the method have noted, the cognitive difficulty associated with the sorting task is quite high (Greenwald, Nosek, and Banaji 2003). Respondents must focus for 5 minutes and sort upwards of 200 items into two separate categories as fast as they can. This can be quite taxing, and certainly more taxing than answering standard survey questions or even a randomized response question or list experiment. Of the 1,000 respondents completing our
survey, roughly 20% did not produce valid IAT scores.

Second, and relatedly, IATs take substantially longer than a standard question battery, and this can crowd out opportunities to ask other important questions (Corstange 2009). Our respondents took an average of 5 minutes to complete the IAT section of the survey (see Figure A5 in the Supporting Information), and only 7 seconds and 17 seconds to complete the direct question (direct.sisi) and list experiment (list.sisi), respectively.

Third, building an IAT can carry a significant upfront cost, depending on the infrastructure used. We chose to work with Project Implicit, an established nonprofit organization founded by the creators of the IAT. This carried an expense of several thousand dollars, though we found other established organizations and computer programmers provided even higher estimates. It is possible for researchers to utilize more “do-it-yourself” tools (Inquisit by Millisecond, IAT Software, FreeIAT, etc.), but such platforms have limitations and can be difficult to customize. IATs are not cheap to build, and researchers must weigh this expense when evaluating whether to employ implicit methods.

For some researchers and applications, the benefits of the implicit approach may outweigh these disadvantages. First and foremost, the IAT provides the highest level of privacy. Respondents are never asked to answer a question involving a sensitive actor, they simply complete the sorting task. Social psychologists have shown that even when asked to do so, respondents have great difficulty presenting one attitude or another on an IAT (Banse, Seise, and Zerbes 2001), especially when ignorant about how the scoring procedure actually works. This makes the IAT especially useful for studying attitudes towards sensitive actors, like leaders of an authoritarian regime.

IATs are also relatively simple to design and would seem less sensitive to small changes in question wording. For the IAT implemented here, the only really discretionary aspect of the design involved selecting images representative of Sisi’s public persona (see questionnaire in the Supporting Information). Following Lane et al. (2007), we selected stimuli (images) that best approximated the construal of the construct of interest, as small differences among these stimuli are unlikely to lead to large differences. The rest of the procedure was simply translated from Project Implicit’s existing text into Arabic and checked with several native speakers for
cross-cultural applicability. The analysis of IATs is also comparatively easy and transparent. Calculating the “D-score” requires that the analyst only know how to take a mean and standard deviation, and the resulting variable can be used in standard regression models.

Most importantly, IATs aim to measure the automatic psychometric properties of attitudes, which remain a significant blindspot in public opinion research on authoritarian rule. Attitude dissociation, while related to preference falsification, is a distinct concept and should be subjected to further study by scholars of authoritarian politics. This analysis has identified distinct subpopulations that engage in both classic (Christians, high income citizens, and government employees) and possibly inverse (students) dissociation. These findings appear to have face validity for the Egyptian case, giving us confidence in the need for additional research using these tools.

We see two particularly promising areas for future study. The first is how regime strategies—particularly the use of propaganda—can influence implicit attitudes. There remains substantial debate as to whether and how propaganda affects citizens’ explicit attitudes toward their governments (Huang 2015; King, Pan, and Roberts 2017). In the Chinese case, for example, Huang (2015) argues that exposure to propaganda does not make citizens more satisfied with government but more likely to believe the government is effective in maintaining social stability. Our hypothesis is that propaganda is effective because it shifts implicit cognition. By repeatedly pairing the concept of the regime with accolades and achievements, propaganda creates strong automatic associations that generate positive implicit attitudes. Foroni and Mayr (2005) find that respondents show more positive implicit attitudes toward insects after reading a brief fantasy story about valuable insects. Future research can build on this design by randomly exposing citizens to different forms of propaganda, in turn investigating whether this a.) shifts their implicit attitudes towards their governments and b.) explicit attitudes are mediated by implicit attitudes.

Finally, it remains an open question whether implicit attitudes actually “matter” for political outcomes and behavior in authoritarian systems. In political science, we tend to think of the big decisions for citizens in these contexts—like whether to join a protest or revolution—as being highly deliberative, rational cost-benefit calculations (Gehlbach, Sonin, and Svolik 2016,
Kuran 1991; Muller and Opp 1986), the sort governed more by conscious cognition and explicit attitudes. Yet existing research in psychology suggests that implicit attitudes and affective, bodily reactions to stimuli influence nearly all of our behaviors in some way or another. Lodge and Taber (2013) summarize the argument nicely:

Unconscious thought processes are continuously at work, not only when people make snap judgments, but also when they think hard about important issues and decisions. These unconscious processes, moreover, constitute the overwhelming majority of human cognitive capacity with unacknowledged import the character of political deliberation... Immediately and without intentional control, a perceived candidate, issue, group, or idea classified as either good or bad, and in a matter of milliseconds this evaluation facilitates a behavioral disposition towards the stimulus (p. 2, 14)

The decision to “Revolt” so-often employed in models of authoritarian politics (Gehlbach, Sonin, and Svolik 2016) is, in reality, more likely a series of small, fast, and often non-deliberative choices– to ignore or answer the door when an agitator calls, to forward or delete an incendiary Tweet, to walk away or toward the noisy crowd in the square, to run or fight when tanks roll in. We suspect implicit attitudes toward the regime play a decisive role in these choices, and we hope future research works to test that hypothesis.
References


Supporting Information

The Supporting Information includes the following materials:

1. **Table A1**: Sample Comparisons

2. **Table A2**: Correlation Matrix

3. **Figure A2**: Determinants of Expressed Explicit and Implicit Attitudes (trimmed weights)

4. **Figure A3**: Determinants of Expressed Explicit and Implicit Attitudes (dichotomized dependent variables)

5. **Figure A4**: Trial Response Times

6. **Figure A5**: Time to Completion for IAT Section

7. **Figure A6**: Response Times and Error Rates Across Blocks

8. **Survey Instrument**
Table A1: Sample Comparisons

<table>
<thead>
<tr>
<th></th>
<th>Arab Barometer</th>
<th>SISI-SCIAT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td></td>
<td>Full</td>
<td>Computer</td>
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</table>

Demographic

<table>
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<th>Arab Barometer</th>
<th>SISI-SCIAT</th>
</tr>
</thead>
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<tr>
<td>female</td>
<td>0.500</td>
<td>0.393</td>
</tr>
<tr>
<td>age</td>
<td>39.2</td>
<td>36.6</td>
</tr>
<tr>
<td>christian</td>
<td>0.058</td>
<td>0.079</td>
</tr>
<tr>
<td>lowed</td>
<td>0.800</td>
<td>0.617</td>
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Professional

<table>
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<th>SISI-SCIAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>employed</td>
<td>0.494</td>
<td>0.637</td>
</tr>
<tr>
<td>student</td>
<td>0.026</td>
<td>0.042</td>
</tr>
<tr>
<td>retired</td>
<td>0.054</td>
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</tr>
<tr>
<td>govemp</td>
<td>0.123</td>
<td>0.226</td>
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<tr>
<td>charitable</td>
<td>0.045</td>
<td>0.083</td>
</tr>
<tr>
<td>profassoc</td>
<td>0.062</td>
<td>0.122</td>
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</table>

Region

<table>
<thead>
<tr>
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<th>Arab Barometer</th>
<th>SISI-SCIAT</th>
</tr>
</thead>
<tbody>
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<td>region.delta</td>
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<td>0.313</td>
</tr>
<tr>
<td>region.upper</td>
<td>0.293</td>
<td>0.291</td>
</tr>
<tr>
<td>region.alex</td>
<td>0.059</td>
<td>0.081</td>
</tr>
<tr>
<td>region.desert</td>
<td>0.0167</td>
<td>0.031</td>
</tr>
</tbody>
</table>

Year          | 2015          | 2015       | 2016      | 2016      |
N             | 1196          | 491        | 844       | 844       |

Note: Table compares means for demographic and professional covariates across the Arab Barometer and SISI-SCIAT samples. The composition of SISI-SCIAT sample proves loosely comparable to that of the Arab Barometer sample for the subset of respondents with internet access. To improve representativeness, the data was weighted using entropy balancing, with results shown in Column 4.
Table A2: Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>female</th>
<th>work_student</th>
<th>lowed</th>
<th>highinc</th>
<th>work_govemp</th>
<th>rel_christian</th>
<th>islamist</th>
<th>liberal</th>
</tr>
</thead>
<tbody>
<tr>
<td>female</td>
<td>1.00</td>
<td>-0.05</td>
<td>-0.06</td>
<td>0.06</td>
<td>-0.10</td>
<td>-0.01</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>work_student</td>
<td>-0.05</td>
<td>1.00</td>
<td>0.26</td>
<td>0.01</td>
<td>-0.23</td>
<td>0.01</td>
<td>0.17</td>
<td>-0.02</td>
</tr>
<tr>
<td>lowed</td>
<td>-0.06</td>
<td>0.26</td>
<td>1.00</td>
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<td>-0.17</td>
<td>-0.01</td>
<td>0.07</td>
<td>-0.01</td>
</tr>
<tr>
<td>highinc</td>
<td>0.06</td>
<td>0.01</td>
<td>-0.21</td>
<td>1.00</td>
<td>0.02</td>
<td>0.05</td>
<td>-0.02</td>
<td>0.03</td>
</tr>
<tr>
<td>work_govemp</td>
<td>-0.10</td>
<td>-0.23</td>
<td>-0.17</td>
<td>0.02</td>
<td>1.00</td>
<td>-0.02</td>
<td>-0.05</td>
<td>0.02</td>
</tr>
<tr>
<td>rel_christian</td>
<td>-0.01</td>
<td>0.01</td>
<td>-0.01</td>
<td>0.05</td>
<td>-0.02</td>
<td>1.00</td>
<td>-0.14</td>
<td>0.20</td>
</tr>
<tr>
<td>islamist</td>
<td>0.00</td>
<td>0.17</td>
<td>0.07</td>
<td>-0.02</td>
<td>-0.05</td>
<td>-0.14</td>
<td>1.00</td>
<td>-0.27</td>
</tr>
<tr>
<td>liberal</td>
<td>0.00</td>
<td>-0.02</td>
<td>-0.01</td>
<td>0.03</td>
<td>0.02</td>
<td>0.20</td>
<td>-0.27</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note: Table shows Pearson correlation coefficients between core variables used in the analysis. All data drawn from the SISI-SCIAT.
Figure A2: Determinants of Expressed Explicit and Implicit Attitudes
(trimmed weights)

Note: Figure shows coefficient estimates from regressions of the standardized support measures (direct.sisi.z and implicit.sisi.z) for different independent variables of interest, across different covariate sets (bivariate, demographic covariates, demographic and region indicators). All data drawn from the SISI-SCIAT. Data is weighted using entropy balancing to tie demographics to the Egyptian sample (with computer access) from the Arab Barometer. Weights are trimmed to a maximum weight / mean ratio of 20 using the ebalance.trim function in R. Segments represent 95% confidence intervals.
Figure A3: Determinants of Expressed Explicit and Implicit Attitudes
(dichotomized dependent variables)

Note: Figure shows estimates for the first difference in the probability of support for different independent variables across the binary attitude indicators (direct.sisi.bin and implicit.sisi.bin) for different covariate sets (bivariate, demographic covariates, demographic and region indicators). All data drawn from the SISI-SCIAT. All estimates reflect simulations of first differences from a probit model with other covariates set to their median values. Data is weighted estimates use entropy balancing to tie demographics to the Egyptian sample (with computer access) from the Arab Barometer. Segments represent 95% confidence intervals.
Figure A4: Trial Response Times

Note: Figure shows the probability density function of reaction.time for all trials, for all respondents included in the analysis (more than 170000 trials in total). All responses less than 400 milliseconds (about 1.1% of all trials) and greater than 10000 milliseconds (about 0.5% of all trials) were excluded from the D-score calculation.
Figure A5: Time to Completion for IAT Section

Note: Figure shows the probability density function of the total time to completion (in minutes) for all respondents included in the analysis.
Figure A6: Response Times and Error Rates Across Blocks

Note: Figure shows the mean reaction time and error value for all trials, for all respondents included in the analysis (more than 170000 trials in total), across the five blocks (see Table 1 for description). Error rates and reaction times are lower for the test blocks (3 and 5) relative to the practice blocks (1, 2, and 4), which suggests respondents learned how to complete the sorting task through the course of the IAT.
EGYPT SINGLE CATEGORY IMPLICIT ASSOCIATION TEST (ESCIAT)

Questionnaire

INTRODUCTION AND CONSENT

This survey is about your political attitudes. It is part of an academic research project. The survey is being conducted by academic researchers and will not be used or seen by the government in any way.

Your participation is completely voluntary. If you agree to participate, you will answer some questions about yourself and complete a short timed categorization exercise. The questions should take about 20 minutes to answer. If you complete the survey, you will receive a small payment.

If you agree to participate, you may refuse to answer any of the questions. Your participation in this study will be confidential. Any identifying information will be accessible only to the researchers and will never appear in any sort of report that might be published or shared. Your personal identity will never be linked to your survey responses, so please answer as honestly as you can.

By clicking Continue below, you are agreeing to participate in the survey.
SECTION I: DEMOGRAPHICS

First, please answer some questions about your personal background.

D1. Gender:
<01> Male 
<02> Female

D2. In what province do you live?
<01> Alexandria
<02> Aswan
<03> Asyut
<04> Beheira
<05> Beni Suef
<06> Cairo
<07> Dakahlia
<08> Damietta
<09> Fayoum
<10> Gharbia
<11> Giza
<12> Ismailia
<13> Kafr el-Sheikh
<14> Luxor
<15> Matruh
<16> Minya
<17> Monufia
<18> New Valley
<19> North Sinai
<20> Port Said
<21> Qalyubia
<22> Qena
<23> Red Sea
<24> Sharqia
<25> Sohag
<26> South Sinai
<27> Suez
<98> Don’t know

D3. In what year were you born?
<99> Don’t know

D4. Level of education:
<01> Elementary
<02> Preparatory/Basic
<03> Secondary
D5. Are you a member of a charitable society?

1. Yes
2. No
98. Don't know

D6. Are you a member of a professional association (union)?

1. Yes
2. No
98. Don't know

D7. Do you work?

01. Full time (30 or more hours a week)
02. Part time (less than 30 hours a week)
03. Retired
04. A housewife
05. A student
06. Unemployed (looking for work)
07. Other (specify)
98. Don't know

D8. Work sector:

01. Public
02. Private
03. Other
98. Don't know

D8a. What is your position at the work? (if you have more than one job, answer with regard to your main job)

01. Director of an institution or a high ranking governmental employee
02. Working at the armed forces or the police
03. A governmental employee
98. Don't know
main job)?

- Employer/director of an institution with 10 employees or more
- Employer/director of an institution with less than 10 employees
- Professional such as lawyer, accountant, teacher, doctor, etc.
- Manual laborer
- Agricultural worker/owner of a farm
- Member of the armed forces/public security
- Owner of a shop/grocery store
- Government employee
- Private sector employee
- Craftsperson
- Don't know

D9. Marital status:
- Single
- Married
- Divorced
- Widowed
- Engaged
- Don't know

D10. Religion:
- Muslim
- Christian
- Don't know

D11. Do you pray daily?
- Always
- Most of the time
- Sometimes
- Rarely
- Never
- Don't know

D12. Do you attend Friday prayer/Sunday services?
- Always
- Most of the time
- Sometimes
- Rarely
D13. Do you listen to or read the Quran/the Bible?

- <01> Always
- <02> Most of the time
- <03> Sometimes
- <04> Rarely
- <05> Never
- <98> Don’t know

D14. Is the house you live in:

- <01> Owned
- <02> Rented
- <03> Owned with mortgage payments to a bank.
- <04> Other (specify) ________
- <98> Don’t know

D15. Monthly household income in Egyptian Pounds:

- <01> Less than 500 LE
- <02> 500 – 1,000 LE
- <03> 1,000 – 1,500 LE
- <04> 1,500 – 2,000 LE
- <05> 2,000 – 2,500 LE
- <06> 2,500 – 3,000 LE
- <07> 3,000 – 4,000 LE
- <08> 4,000 – 5,000 LE
- <09> 5,000 – 7,500 LE
- <10> 7,500 – 10,000 LE
- <11> More than 10,000 LE
- <98> Don’t know

D16. Which of these statements comes closes to describing your household income?

- <01> Our household income covers our expenses well and we are able to save.
- <02> Our household income covers our expenses without notable difficulties.
- <03> Our household income does not cover our expenses and we face some difficulties in meeting our needs.
- <04> Our household income does not cover our expenses well and we are unable to save.
expenses and we face significant difficulties in meeting our needs.
<98> Don’t know
SECTION 2: POLITICAL ATTITUDES AND PARTICIPATION

S1. Did you vote in the last parliamentary elections that were held from October to December 2015?

<01> Yes
<02> No
<98> Don't know

S2. Did you vote in the last presidential election that was held in May 2014?

<01> Yes
<02> No
<98> Don't know

S3. What is the name of the current Egyptian Foreign Minister? Give your best answer.

S4. If you can remember, approximately how many seats are there in the Parliament? Give your best answer; you do not need to be precise.

S5. To what extent do you agree or disagree with the following statements?

- Democracy is appropriate for Egypt.

<01> Strongly agree
<02> Agree
<03> Disagree
<04> Strongly disagree
<98> Don't know

S6. To what extent do you agree or disagree with the following statements?

- Democratic systems are not effective at maintaining order and stability.

<01> Strongly agree
<02> Agree
<03> Disagree
<04> Strongly disagree
<98> Don't know
S7. To what extent do you agree or disagree with the following statements?

A democratic system may have problems, yet it is better than other systems.

S8. To what extent do you agree or disagree with the following statements?

Your country is better off if religious people hold public positions in the state.

S9. To what extent do you agree or disagree with the following statements?

Religious leaders (imams, preachers, priests) should have influence over government decisions.

S10. Do you approve or not approve the performance of Abdel Fattah El-Sisi as President?

Have you watched the performance of Abdel Fattah El-Sisi as President?
S11. Generally speaking, how would you evaluate the performance of the Parliament in carrying out its tasks and duties?

- 01 Very good
- 02 Good
- 03 Neither good nor bad
- 04 Bad
- 05 Very bad
- 98 Don’t know

S12. Generally speaking, how would you evaluate the performance of the Government (Cabinet) in carrying out its tasks and duties?

- 01 Very good
- 02 Good
- 03 Neither good nor bad
- 04 Bad
- 05 Very bad
- 98 Don’t know

S13. Generally speaking, how would you evaluate the performance of the Judiciary in carrying out its tasks and duties?

- 01 Very good
- 02 Good
- 03 Neither good nor bad
- 04 Bad
- 05 Very bad
- 98 Don’t know

S14. Generally speaking, how would you evaluate the performance of the Police in carrying out its tasks and duties?

- 01 Very good
- 02 Good
- 03 Neither good nor bad
- 04 Bad
- 05 Very bad
- 98 Don’t know

S15. Generally speaking, how would you evaluate the performance of the Army in carrying out its tasks and duties?

- 01 Very good
<02> Good
<03> Neither good nor bad
<04> Bad
<05> Very bad
<98> Don't know

Random assignment to either S16a or S16b

S16a. How many of these politicians do you support? We do not want to know whom, just how many.

Gamal Abdel Nasser
Anwar Sadat
Hosni Mubarak
Abdel Fattah El-Sisi

| 0 | <01> 0 |
| 1 | <02> 1 |
| 2 | <03> 2 |
| 3 | <04> 3 |
| 4 | <05> 4 |
| 98 | <98> Don't know |

S16b. How many of these politicians do you support? We do not want to know whom, just how many.

Gamal Abdel Nasser
Anwar Sadat
Hosni Mubarak

| 0 | <01> 0 |
| 1 | <02> 1 |
| 2 | <03> 2 |
| 3 | <04> 3 |
| 98 | <98> Don't know |
SECTION 3: IMPLICIT ATTITUDE TEST

Next, you will use the "e" and "i" computer keys to categorize items into groups as fast as you can. Below are the three groups and the items that belong to each. Please take a moment and read the exemplars carefully before you begin.

<table>
<thead>
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<td>Abdel Fattah El-Sisi</td>
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</tbody>
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There are five parts. The instructions change for each part. Pay attention!

Press "E" for Good
Press "I" for Bad

Put a left finger on the E key for items that belong to the category Good. Put a right finger for items that belong to the category Bad.
on the 1 key for items that belong to the category Bad. Items will appear one at a time.

If you make a mistake, a red X will appear. Press the other key to continue.

Press the space bar when you are ready to start.
SECTION 4: CONCLUSION

Thank you for participating in this survey.

All of your answers to the questions will be kept strictly confidential. Please contact egyptsurvey2016@gmail.com with any questions or comments.

Thank you for completing the study.
APPENDIX 1: PHOTOS OF ABDEL FATAH EL-SISI

ملحق 1: صور من عبد الفتاح السيسي